

**ABSTRACT****DNA-BRIDGED CARBON NANOTUBE ARRAYS**

A class of biological sensing devices that include a substrate comprising an array of carbon nanotubes (CNTs) to which are chemically attached biological molecules is disclosed. The attached biological molecules are capable of electrical conductivity that is responsive to chemical changes occurring as a result of their interaction with target species. A means for means for using DNA as a material of potential in molecular electronic sensor devices, being primarily based on molecular electron-transfer reaction processes between DNA-binding donors and acceptors is also disclosed, including composition, method of manufacture and their use are described.

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